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## Designing frames: The use of precedents in parliamentary debate

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Title: Designing Frames: The Use of Precedents in Parliamentary Debate.

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Abstract:

Using the naturally-occurring data of official UK Parliamentary transcripts for the development of a new high speed rail project, this paper takes one characteristic of the design process, the use of precedent, to explore how problems and solutions are framed during discussion. In contrast to accounts of reframing that describe one big insight changing the design process we show how one particular precedent allows a series of attempts at reframing to take place in discussion. We conclude by arguing that precedents enable a *diffusion* of semi-objective meaning in discussion, similar to a prototype in a more conventional design process. This contrasts with other types of discourse elements, such as storytelling, that function through the subjective *accumulation* of meaning.

Keywords: design process; design precedents; framing; discourse analysis; legislation

The fields of design and design research have always had strong instrumental connections with government and policy. Margaret Thatcher, in a foreword to a 1982 Conference on *Design Policy*, co-organised by the Design Research Society, focused on the benefit that good design could bring to consumers, writing: “throughout the world today, design ought to mean more than attractively finished products ... design should be the starting point where the



customer's needs are brought together with the realities of manufacture. [The designer] must know about manufacturing costs and about giving the customer value for money. Design research, education, and practice, are therefore of great significance to our economic and social wellbeing" (Langdon 1984). More recent work with government, though shifting away from a market led view of consumer products, has maintained the focus on improving economic and social wellbeing at the level of policy through the use of design (Miller and Rudnick 2011), design thinking, and design methods to work collaboratively with policymakers in 'labs' (Kimbell 2015; Bailey & Lloyd 2016; Bason 2014) and 'nudge units' (Sunstein 2014; Leggett 2014) worldwide.

In contrast to the *use* of designing in and by government, seeing the work of government as a kind of designing has also received attention in the literature, notably through the work of Schön and Rein (Schön 1980, Schön and Rein 1994, Rein and Schön 1996) but also more recently (Dorst 2015; Umney et al 2014; Howlett 2014; Voß et al 2009). Here the concept of framing has been key in showing and exploring the dynamic relationship between complex socio-technical problems – for example in social policy, healthcare, energy, education, and transport – and the kind of solutions that are proposed (Hilton 2016). Schön's work, in particular, has usefully developed a number of terms for talking about general aspects of the design process that can be readily applied to the development of legislation and political debate. Terms such as 'repertoire' (Schön 1988), 'framing' (Schön 1984), 'seeing-as' (Schön and Wiggins 1992), 'naming' (Schön 1983), and 'precedent' (Schön 1988) have all helped describe how knowledge, experience and expertise are enacted during *any* process of design.

In this paper we focus on the specific mechanism of introducing precedent (Alipour 2017; Doboli and Umbarkar 2014) to show how framing takes place in debates about large-scale infrastructure. This makes the case for debates being considered as design activity, for which framing is viewed as integral (Paton and Dorst 2011). The introduction of a precedent allows existing examples to be interrogated, as more conventional prototypes would be, in the terms of a new project (McDonnell and Lloyd 2014). As with other types of wicked problems, and distinct from more conventional design processes, physical prototyping has limited usefulness and relevance during major infrastructure projects. While there is scope for engineers and planners to develop software models that predict behaviours and visualise the way solutions

look when completed, these models are idealised and, of course, contested and often controversial. Precedents, then, provide a temporal analogy; a source is drawn from the past, with particular attributes that are intended to have some effect on the way we see the future (Lawson 2004). The introduction of a precedent to a design process can therefore perform an important role in the development of a project, providing potential insights into the direction that stakeholders wish to see the future going and perhaps also their motivation for getting there.

## 1. The UK Parliamentary Context

The context in which we examine the use of precedents in political debate is the UK Parliament, where issues of national concern are discussed in the development of new legislation (Rogers and Walters, 2015; Crewe, 2015). The UK Parliament follows a series of prescribed stages in producing its ‘designed’ output in the form of legislative *Bills*. The process shown in Figure 1 is the UK Government’s representation of the parliamentary process, reproduced across a range of official publications. The stages of Figure 1 are formal readings, debates, and committees in which both elected Members of Parliament (MPs) and non-elected Members (Lords) contribute in questioning or defending the principles of any given Bill – in effect analysing problems and developing solutions – and then vote to approve or reject it.

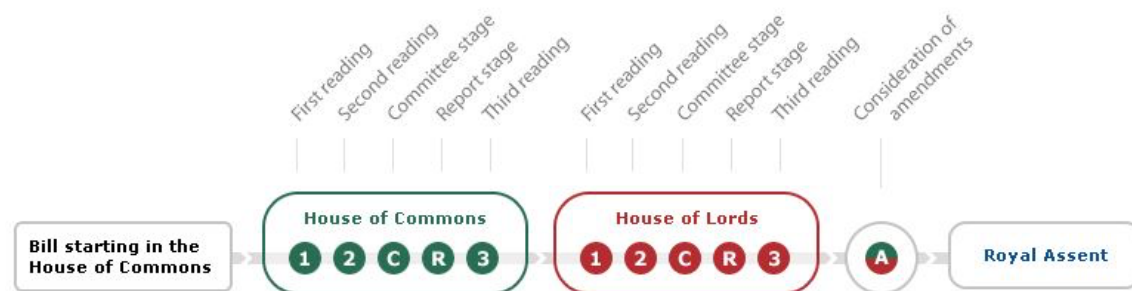


Figure 1. The passage of a Bill through the UK Parliament. The Bill is first presented to the House of Commons and passes various stages of debate, scrutiny, and amendment before being passed into law through the final stage of ‘Royal Assent’ (Image permission: Open Parliament Licence Version 3.0)

The passage of a Parliamentary Bill, shown in Figure 1, can be readily mapped on to models of the design process that emphasise, for example, stages of development (Pugh 1990),

divergence and convergence [1], or analysis and synthesis (Roozenburg and Cross 1991).

Figure 2, for example, shows how each stage of the Parliamentary process can be thought of as one of divergence, as ideas are generated, then convergence as votes are made and amendments agreed upon.

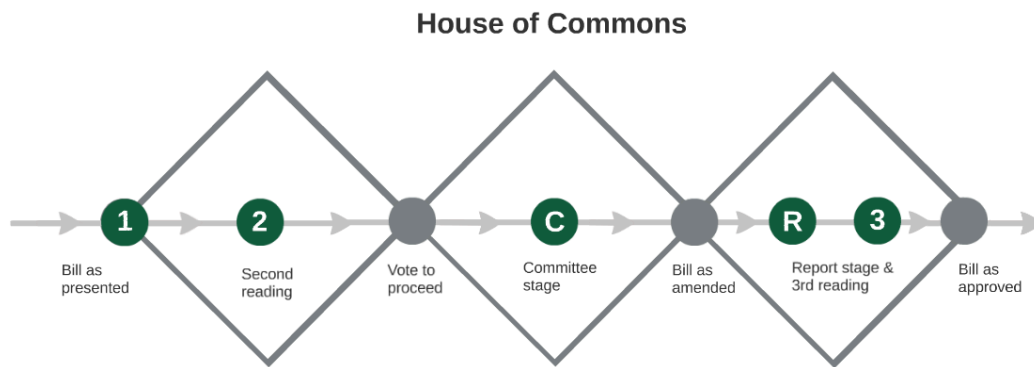


Figure 2. Stages of the parliamentary process shown here as elements of a series of three divergent and convergent activities. (Image permission: Open Parliament Licence Version 3.0).

A key stage of the process of developing a Parliamentary Bill is known as the *second reading* (point 2 in Figures 1 and 2). This is the first opportunity for the underlying principles of a Bill to be scrutinised by those who have not necessarily been involved in its drafting. The second reading is also the first stage in the Parliamentary process where a vote is taken to decide whether a Bill can proceed to subsequent stages. The second reading, then, is the point where the future of a project is decided and is analogous to a design meeting where a concept is first shown to a client and others for scrutiny, comment, and approval. For this reason a second reading debate was chosen for the analysis in subsequent sections of the paper.

## 2. Designing a country: Debate about infrastructure

The particular debate selected for our study was the proposed development of a high speed railway known as High Speed Two (HS2). The proposed route of HS2 (shown in Figure 3) connects four of the country's largest cities, running from London to Birmingham and then extending with two extensions to the northern cities of Manchester and Leeds. The proposed route runs through a large number of local communities, and also a protected rural area. At a projected cost of £52 billion it also involves considerable public investment.



Figure 3. The proposed route of HS2. The first phase of development is from London to Birmingham, with later phases branching to major urban centres in the North of the country (image permission: Guardian Newspapers)

The HS2 Bill thus forms an important part of the government's plans for the UK but, as we outlined earlier, is also a project that is controversial, difficult to resolve, and that doesn't allow for realistic prototyping.

The second reading of the HS2 Preparation Bill, that was analysed for this study took place on 26<sup>th</sup> June, 2013. The UK government transcribes, 'substantially verbatim', all debates of this kind and publishes them in a formal record of proceedings known as Hansard [2]. The debate transcripts are thus an example of naturally-occurring data, produced during the normal course of events, and we use them as transcripts of design talk in the manner of recent Design Thinking Research Symposiums (Cross, Christiaans and Dorst 1996; Lloyd and McDonnell 2009a; Christensen, Ball and Halskov 2017). The transcript of the HS2 debate comprises 3380 lines of text (14,000 words) representing four and a half hours of debate undertaken by 57 participants. Relevant sections of the debate referred to in this paper are excerpts from the full Hansard record which is available online [3].

### 3. Approaches to Analysis

#### 3.1 Frequency and sources of precedents found

Precedents can be clearly identified in the debate as references to previous projects. A close reading of the transcript revealed 85 instances of precedents, from a range of different sources, and which are listed in Table 1 below together with a description.

<i>Precedent Source</i>	<i>Description</i>	<i>Frequency</i>
High Speed Rail	Projects developed or planned in other countries	22
High Speed One (HS1)	Existing high speed rail line linking London with Europe via the channel tunnel	16
Victorian Engineers	Developed the original UK railway network	9
West Coast Mainline	Intercity railway between London, North West England and Scotland	7
Crossrail	Major ongoing infrastructure project connecting East and West London, scheduled for completion in 2018	6
Motorways	Major roads in the UK	5
Jubilee Line	Extension of the London Underground network to the docklands area, opened in 1999	3
Olympic Games	Held in London in 2012	3
Thameslink	Mainline cross-London railway from North to South	2
Beeching	1963 rationalisation of the UK railway network	1
British Rail	Publicly owned railway company prior to privatisation	1
London Buses	Public transport in London	1
Manchester Airport	International airport in the North West of the UK	1
Previous High Spend Capital Projects	Various	1
Privatisation of the Railways	Enacted by the Conservative Government in 1993	1
Tower of London	11th century castle in central London	1
<b>Total</b>		<b>85</b>

Table 1. The full set of precedents found in the debate transcript

Of all the precedents listed in Table 1 there is only one example of a high speed railway project in the UK: High Speed One (HS1). This line connects London with Paris and

Brussels via the Channel Tunnel and, completed in 2007, is a clearly relevant precedent for HS2 in terms of a combination of its use of a similar technology, its geographical proximity to London and recent timeframe.

One example of how precedents appear in the debate is shown in the excerpt below where the positive impacts of a prior project, in this case iconic examples of Victorian engineering, are used to inform the current debate:

Iain Stewart, Member of Parliament (MP), UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 364.	My hon. Friend is absolutely right. To those who voice concern about visual intrusion on areas of outstanding natural beauty, I simply make the point that railway infrastructure need not be ugly—it need not be concrete blocks. Look at some of the fantastic pieces of railway engineering and architecture we have: the Forth bridge, the Glenfinnan viaduct, Brunel’s bridges and tunnels—they have enhanced the landscape. I urge my right hon. Friend the Minister of State to make HS2 into an opportunity to showcase the best of British design and engineering, with bridges, viaducts and other infrastructure that show off and augment our landscape.
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In the excerpt the language is formal, with members of parliament referring to each other as ‘my honourable friend’. It is also stylised in the manner of a public performance: ‘I urge my right honourable friend to...’. In other respects the excerpt is a relatively straightforward detailing of a number of ideas and connections that are not dissimilar from what might take place in an organisational meeting discussing a design solution.

### 3.2 Identification of precedent elements

There is a small literature of studies investigating how precedents figure in design processes from a controlled, analytical point of view (for example Alipour 2017; Doboli & Umbarker 2014; Senbel 2013). While relevant to the present context, the practice-based nature of the current study, being more centred on framing within a context of naturally occurring language, required a slightly more open approach to analysis. For that reason the coding system we use derives from the frame creation process outlined by Dorst (2015), a reframing aid to help designers engage with complex problems in social contexts. Dorst uses an ‘if-then’ construct: ‘*If the problem situation is approached as if it is [insert example] then [describe consequences for framing that follow]*’. This construct has allowed us to identify specific

forms of language relating to how precedents are used to frame the debate. The context of the precedent can thus be extracted through first, the identification of a specific SOURCE; second, the ATTRIBUTES of that source that are relevant to both the SOURCE and the current debate (i.e. HS2); third, a particular PROBLEM identified within the debate by the speaker; and fourth, the anticipated EFFECT these attributes may have. These elements, as found in the excerpt above, are listed below together with their indicative tags.

- [SOURCE]: Victorian architecture
- {ATTRIBUTE}: fantastic pieces of engineering; enhance the landscape
- <PROBLEM>: concern about visual intrusion
- ((EFFECT)): showcase for design and engineering; show off the landscape

The template of Table 2 represents the use of a precedent within the excerpted context, identifying the narrative being developed by the speaker and the framing that is introduced through that narrative. Table 2 below, shows how in the excerpt a reframing occurs in the debate to shift the focus from concerns about visual intrusion to embracing an opportunity to show off both the country's design capability, and the country itself.

Transcript Excerpt Analysis UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 364.	
MP Stewart	My Honourable Friend is absolutely right. To those who voice concern about <visual intrusion on areas of outstanding natural beauty>, I simply make the point that railway infrastructure need not be ugly—it need not be concrete blocks. Look at some of the {fantastic pieces of railway engineering and architecture} we have: the [Forth bridge, the Glenfinnan viaduct, Brunel's bridges and tunnels]—they have {enhanced the landscape}. I urge my right hon. Friend the Minister of State to make HS2 into an opportunity to ((showcase the best of British design and engineering)), with bridges, viaducts and other infrastructure that show off and ((augment our landscape)).
[SOURCE]	<i>Victorian architecture</i>
{ATTRIBUTE}	<i>Fantastic pieces of engineering; Enhance the landscape</i>
<PROBLEM>	<i>Concern about visual intrusion</i>
((EFFECT))	<i>Showcase for design and engineering; Show off the landscape</i>
REFRAMING	<i>Intrusion to enhancement</i> If we look at the impact of railways on the landscape from the perspective of Victorian architecture then HS2 will be a national showcase for design and the landscape.

Table 2. Transcript excerpt and elements of the precedent identified in the debate through a tagging analysis

Table 2 reveals that the talk of the excerpt calls upon the aesthetic qualities of earlier designed objects and provides a shortcut from the potentially “ugly” to the demonstrably “fantastic”. The precedent of the Victorian railway thus functions as an aesthetic reframing device. The precedent allows an holistic imagining of a final solution that is a necessary aspect of an infrastructure debate. It also provides a direct parallel with the use of a concept design in a design process.

The precedent in Table 2 also serves to consolidate the identity of a nascent design team, developing a collective and positive common language around the project. The ‘ugly concrete blocks’ envisaged by opponents to the railway are countered with a more sophisticated aesthetic approach that might be adopted by supporters of HS2. This takes account of a wider notion of Britain as a nation of designers and engineers and Britain as a landscape that, the speaker urges, should be shown off. The identity of HS2 supporters is thereby, through the use of this precedent, connected to the geographical fabric of the nation. The designed object, the railway line, becomes embedded within the design of the country in which it will be built.

In the following sections we concentrate on just one of the precedents listed in Table 1, that of HS1 (the first UK High Speed Rail project) to demonstrate how this one particular precedent allows a wide range of essentially design issues to be raised by different speakers during the debate. This allows the HS1 precedent to become an element of discourse around which debate participants can position themselves, each trying to establish a frame for the problem that others will acknowledge and accommodate.

#### 4. Aspects of the HS1 Precedent

##### 4.1 Planning the process

The first aspect that the HS1 precedent relates to is the overall planning of the process of debate. As both HS1 and HS2 are major infrastructure projects they are both required to follow the same legislative process, shown earlier in Figure 1, before they can be built. The amount of time needed for such projects to pass through this process is commented on in the excerpt shown in Table 3.



Transcript Excerpt Analysis	
UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 351.	
MP Eagle	Despite its inclusion in the Queen's Speech, <Ministers cannot even guarantee a Second Reading> for the hybrid Bill in this Session, ((leaving just one year to secure its passage through both Houses)). {It took two years and one month to take the hybrid Bill for [High Speed 1] through Parliament, and [Crossrail] took three years and five months.} Neither of those schemes was on the scale, or came with as much controversy, as this new rail line. <The Government's inaction> in the past three years requires them to ((rush the Bill at the end of this Parliament)).
[SOURCE]	<i>HS1, Crossrail</i>
{ATTRIBUTE}	<i>Time taken for legislation to pass through parliament</i>
<PROBLEM>	<i>Competence of Government responsible for the passage of the HS2 Bill</i>
((EFFECT))	<i>Not enough time for proper debate</i>
REFRAMING	<i>Shorter time to longer time for debate</i> If parliamentary process is viewed from the perspective of previous projects then this project, with its larger scale and wider controversy, needs increased time for the parliamentary process.

Table 3. Tagging analysis of transcript excerpt looking at process planning

In the excerpt the speaker, a supporter of HS2 but not a member of the Government, is using HS1 to demonstrate how long it will take for HS2 to gain approval. The lower level of complexity and smaller amount of controversy of HS1, it is claimed, still led to a parliamentary process that took twice as long as the amount of time allocated for HS2. This comparison is used to demonstrate that the Government has not learned sufficiently from the prior project. As a result of the Government's inactivity the debate could be seen to be rushed, the speaker suggests, with the Government looking inept at managing the process. Although this particular speaker is opposed to the Government, they support the development of HS2, so citing HS1 as a precedent allows them to point to evidence that better planning is needed, but also that the fault of the current plan lies with the Government. The attributes of the precedent, then, have something of a dual nature, reframing the problem not only as one of proper time management but also one of Government competence.

#### 4.2 Establishing needs

One of the main arguments for building the HS2 line is that the existing transport network, including road and rail, is congested with the railway network running north from London

projected to reach full capacity within a decade. In the excerpt analysis of Table 4 we see how the concept of capacity is reframed through the HS1 precedent.

Transcript Excerpt Analysis UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 390.	
MP Turner	<Only a very small percentage of people use trains regularly>. As the Transport Secretary has said, [10 million people travel annually on HS1, or about 30,000 people a day]; another, say, [1.5 million people travel on all the other trains]. What is the number of those not travelling? Practically everyone else in the country—59 million, say. That is the difference: {1.5 million on the one hand and 59 million on the other}.
[SOURCE]	<i>HS1</i>
{ATTRIBUTE}	<i>Passengers as a proportion of population</i>
<PROBLEM>	<i>The argued need for HS2</i>
((EFFECT))	<i>More trains are unnecessary</i>
REFRAMING	<i>Regular train users to non-train users</i> HS1 passenger numbers expressed as a proportion of total population mean that HS2 is not necessary.

Table 4. Tagging analysis of transcript excerpt looking at establishing needs

By identifying rail passengers as a discrete group of the population, based on the number of people travelling on HS1, the speaker in the excerpt of Table 4 infers a much larger group of people who do not use, and therefore do not need, trains to travel. This inference challenges the dominant narrative that justifies HS2 in terms of an absolute, and soon to be reached, capacity in the existing network and which argues that more trains are needed because more people will want to use them. The alternative perspective is thus to take a relative view of train users as a proportion of the overall population – a quoted ratio of 1.5 to 59 million (2.5%) people. The precedent of HS1 is thus cited to question the need to build a railway for the benefit of only a small minority of people.

#### 4.3 Conceptual design

The excerpt analysis of Table 5 shows how HS1 is used as a means to illustrate how a late intervention to change an established, though controversial, route resulted in a number of good (but perhaps unforeseen) consequences.

Transcript Excerpt Analysis	
UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 392.	
MP Clifton-Brown	I would say to her, and to my right hon. Friend the Secretary of State, that they should look at the process that was involved with HS1. The then new Secretary of State, my right hon. and learned Friend the Member for Kensington, very late in the day, called in all the evidence and {changed the route}. [That route, which had been designed by British Rail, went right through south London and was going to blight large numbers of houses], and {he changed it at the very last minute}. If he had not done so, [Stratford International] would never have come into being and [the Olympics] would never have taken place. I say this to my right hon. Friend: <do please look at the route>, because if we are spending this vast amount of money, let us, as a nation, ((get the maximum out of it)).
[SOURCE]	<i>HS1, Stratford International, London Olympics</i>
{ATTRIBUTE}	<i>Ministerial intervention</i>
<PROBLEM>	<i>Poor route planning</i>
((EFFECT))	<i>Reduce planning blight and maximise future benefits of project</i>
REFRAMING	<i>Route is fixed to route is flexible</i> Looking at route selection (which has already been made for HS2) from the perspective of HS1 (which was subject to late and radical change) then it is not too late to change and improve the proposed route for HS2.

Table 5. Tagging analysis of transcript excerpt looking at conceptual design

Citing the HS1 precedent introduces the idea that individual agency can result in significant and positive changes to a decision that appears to have been already settled. By comparing the route designed by British Rail (which ‘was going to blight large numbers of houses’) to the free thinking of a new transport minister, the precedent forces a consideration of the unintended, though beneficial, consequences that might result from a particular route. The suggestion is that the late route change supported a subsequent argument for infrastructure that allowed London to win the 2012 Olympics. The speaker thus presents the HS1 case as an example of where good (and perhaps by implication, individual and intuitive) decision-making can result in unforeseen benefits for the whole nation. The reframing that takes place is in the suggestion that by looking at alternative routes in terms of the possibility of developing future infrastructure, a controversial route can become a lever for further development.

#### 4.4 Detailed design

Table 6 focuses on a very particular aspect of high speed railways: the noise they make. In the

following excerpt the precedent of HS1 is used as a measure for the proposed development of HS2.

Transcript Excerpt Analysis	
UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 363.	
MP Stewart	I am grateful to my hon. Friend for that intervention. I took the opportunity to visit the route of [High Speed 1] and saw the {noise mitigation measures} that had been put in place. <The noise of the trains> is ((not much more audible)) than that of an [A-road] or other minor piece of infrastructure>.
[SOURCE]	<i>HS1, A-road (Trunk road)</i>
{ATTRIBUTE}	<i>Noise mitigation measures</i>
<PROBLEM>	<i>Perceived negative impact of HS2</i>
((EFFECT))	<i>High Speed Rail is quiet</i>
REFRAMING	<i>High noise to low noise</i> If noise mitigation is the same as for HS1, then HS2 will be as quiet as a trunk road.

Table 6. Tagging analysis of transcript excerpt looking at detailed design

In the excerpt the speaker describes how they ‘visit[ed] the route’ of HS1 in order to determine the level of noise that the trains made after ‘noise mitigation measures’ had been taken. In the speaker’s opinion the noise wasn’t much more than a main road or other ‘minor piece of infrastructure’, implying that it was much less than they expected it to be. This is a reframing process that shifts the perceived scale of HS2, usually described as a major piece of infrastructure, into something much smaller, through the particular aspect of noise. The speaker suggests that this can be achieved by attending to the detail of noise mitigation measures.

#### 4.5 Evaluating outcomes

What will be the economic benefits of building a high-speed railway? The HS1 precedent of the following excerpt (Table 7) provides evidence of how having a high-speed rail network can increase local economic activity.

Transcript Excerpt Analysis	
UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 403.	
MP Collins	The Secretary of State described the business situation in Kent, an issue that, as a Kent MP, I should like to touch on. It is impossible to imagine how east

	Kent can be ((regenerated)) without the <benefits> that [High Speed 1] brings. I sit in meetings with the ((regeneration group)) that looks at the east Kent regional growth zone, and selling the <benefits> of [High Speed 1] and the {lower journey times into London} is the single biggest advantage we have. As the Secretary of State pointed out, the [HS1] line runs only as far as Ashford into London; the rolling stock running from Folkestone, Dover and Canterbury into Thanet is also a ((massive source of regeneration)).
[SOURCE]	<i>HS1</i>
{ATTRIBUTE}	<i>Journey times into London</i>
<PROBLEM>	<i>Regenerating local economies</i>
((EFFECT))	<i>A large source of regeneration</i>
REFRAMING	<i>Narrow regeneration to wide regeneration</i> The increased speed of journeys into London with HS1 will mean that HS2 will be a source of wider regeneration.

Table 7. Tagging analysis of transcript excerpt looking at outcome evaluation

The speaker in the Table 7 excerpt talks from personal experience about how the HS1 rail link, that runs from the South Eastern UK region of Kent to London, has enabled economic growth and regeneration in areas that have previously been economically depressed. Decreased journey times over a longer distance have meant commuters have been able to move further away from London, bringing increased wealth to these regions. The speaker refers to this effect as ‘the single biggest advantage we have’, proposing a direct correlation between the high speed of the passenger services proposed for HS2 and the economic growth that is predicted for the areas around its stations and services that connect to them. The issue of how far regeneration and growth extend beyond the areas around railway stations is, however, vexed. What the speaker does by citing the HS1 precedent is attempt to reframe the idea of regeneration occurring in a relatively small area to argue that a much wider region will benefit.

#### 4.6 Reflections on the design process

The final example in this section involves a discussion about the meta-issue of whether using precedents to make arguments is a valid way to proceed with discussion about HS2. The excerpt in Table 8 cites a number of past examples of infrastructure in making the case that any new infrastructure should be treated on its own terms as unique.

Transcript Excerpt Analysis	
UK House of Commons, HS2 Preparation Bill, 18 <sup>th</sup> June 2013: Column 380.	
MP Leadsom	We have also heard comparisons with the [motorway network], the [Jubilee line] and [HS1]. They were all very much resisted at the time, but {every single one of them was unique in its own way}. For [motorways], there is a junction every few miles, so everybody benefits from them; they undoubtedly promote growth in our economy. Likewise, the [Jubilee line] has many stops, and therefore benefits a huge swathe of the population. [HS1] is {unique} in the sense that it was the link to mainland Europe. <HS2 is none of those things>; it is ((a decision that we have taken in isolation)).
[SOURCE]	<i>HS1, Jubilee line, Motorways</i>
{ATTRIBUTE}	<i>Uniqueness of prior examples</i>
<PROBLEM>	<i>HS2 is not like other projects</i>
((EFFECT))	<i>The new case must be considered on its own terms</i>
REFRAMING	<i>Analysis of benefit as unique versus analysis of benefit based on precedent</i> There are clear differences between HS2 and previous rail and road precedents that means that drawing lessons by citing precedent is not meaningful.

Table 8. Tagging analysis of transcript excerpt reflecting on the validity of arguing from precedent

In the transcript excerpt the speaker contends that any arguments for the benefits of HS2 that are based on previous examples of infrastructure are not sound. HS2, they reason, has none of the key features that the previous infrastructure they cite have, so making assumptions based on the benefits that these precedents have brought is not warranted in this particular case. By questioning the value of drawing on precedents for arguments, the speaker is attempting to reframe the discussion and decision-making process to one that focuses directly on the new case, rather than (to their mind rhetorically) making claims from previous cases that are very different.

The intervention is interesting because, in citing particular precedents to illustrate how they are not useful in making the case for future benefit, the idea of using precedents to make other types of cases and arguments (i.e. in this case to reframe the soundness and validity of arguments) is reinforced. Such a position corresponds to Schön's (1983) idea of particular cases being a 'universe of one' to indicate that every complex problem-solution pair has a unique set of features and dynamics. For Schön, however, and perhaps also for the speaker in the excerpt of Table 8, the concern is with the extent to which particular things from the past can teach us about the present, not in denying that precedents can't be helpful. Indeed, as we

have shown, the speaker in excerpt of Table 8 unwittingly illustrates how the idea of precedents can function in more sophisticated arguments about the process of considering the relevance of evidence.

## 5. Discussion

We started with the question of whether it was possible to analyse the legislative process as a design process. By showing how framing occurs in Parliamentary debate through the use of precedent, and given that framing is thought to be a key element of designing, then we can conclude that to some extent the legislative process is one of designing. The excerpts we have presented in the previous section all relate to one particular precedent for the High Speed Rail 2 (HS2) project, that of High Speed Rail 1 (HS1), the second most commonly cited precedent in the parliamentary debate we have looked at. By selecting one precedent to analyse we have shown two things. First, the diversity of contexts in which a precedent can be drawn on in attempting to reframe an evidence-based design argument. Second, the structural indicators of a precedent's use in discourse. The excerpts we looked at were ordered so as to relate to stages of the design process – from concept development to evaluation of the process – giving further weight to the analogy between parliamentary debate and the process of design that was outlined at the beginning of the paper. The use of framing discourse, and of the role that precedents play in that framing is, we argue, evidence of a design process taking place.

The literature on framing in design often discusses cases that hinge on particular insights that significantly change the way that a problem-solution pair is viewed. This is true both for individuals working on problems (Schön 1983) and also for larger teams of designers and other stakeholders (Dorst 2015). What the evidence we have looked at shows is, rather than a big insight turning around the entire nature of the problem, there are a series of smaller attempts at reframing, drawing on the past to shift the present situation (and possible future consequences) in one way or another. The fact that just one precedent is used in so many attempts at reframing, some successful and some not, illustrates why they play such an important function in design discourse.

In our analysis we broke down each use of the HS1 precedent into component parts using tagging codes. What do these tagging codes tell us? Of course they show the consistent

structural qualities of how precedents manifest in discourse, but they also reveal how those consistencies act structurally as a container for carrying an argument that connects the past with the future. A well-defined source, set of attributes, identifiable problem, and target issue provide the architecture for a unit of discourse that can effectively transfer learning and experience from the past into the present.

The function of precedent in design discourse is similar in some respects to that of storytelling (Lloyd & Oak, in press). Both are constructions that enable experience to be articulated in design discussions. Stories have a narrative structure, gaining rhetorical force through the expression of a subjective experience relating to a design issue being articulated. Precedents are more objective accounts of the past, which more people will have experience of, or be able to relate to. With a precedent the rhetorical force is to a kind of ‘common sense’. So the precedent of Table 7, for example, was used to make the case for the economic benefits that high speed rail will bring, is put as if it is objectively the case that those benefits have occurred and therefore should be obvious to all. This is an aspect of both discourse involving precedent (Meyler, 2016) and evidential claims in parliamentary debate (van Dijk, 2000) that has been noted elsewhere. The HS1 precedent cited in all excerpts illustrates the range of evidential claims that are possible. These two modes of articulating experience, precedent and storytelling, do also overlap. In excerpt of Table 6, for example, while using the HS1 precedent to talk about noise mitigation, the speaker uses their subjective experience, telling a story about visiting one of the HS1 locations where the measures had successfully been put in place to reduce noise, to claim that the noise made was ‘not much more audible than that of a [main] road’. In this case the precedent, which brings the attributes under discussion into focus, provides a structure and argument that a story can enhance. The concept of ‘noise’, then, is modulated by both the precedent and the story.

What the use of precedent does, as with storytelling, is help to develop the language of the particular problem-solution pair under discussion. A precedent, from a named starting point, and through the range of claims that can be made of it, *diffuses* meaning into a new design process through the attempt to assign attributes between target and source. As we have seen the valency of these can be both positive and negative, and relate to all aspects of the design process, including (as we saw in the excerpt of Table 8) the validity of using precedents in



making arguments. In contrast, as Lloyd & Oak (in press) have shown, a story *accumulates* meaning, finding a place in a design process through being told and retold. Meaning attaches to story, while meaning emanates from precedent. Both, however, through being ‘named’, end up as economical shorthand for referring to different types of prior experience and it is in this way that the language of a particular design process develops. The word ‘noise’, outlined in the paragraph above, gains additional meaning in the particular context of the HS2 design process through being associated with a precedent (HS1) and a story (the visit to experience the noise). Indeed, that is one of the most compelling arguments for considering political debate as design process; the way that new language elements emerge and evolve. The ‘discovery’, nurturing and development of particular phrases is a key feature of design, as it is in political debate.

Precedents, however, through being more akin to prototypes, bring something more directly into the design process than do stories. Not only do they serve to nuance the existing language of a design process – in the case of HS2, terms like ‘capacity’, ‘benefit’, ‘regeneration’, and ‘noise’ – those terms themselves bring assumptions about particular user groups and other participants in the process. This provides an interesting subdivision of the problem-solution pair based on potential population groups, and one that makes the emerging language of a design process more overtly social and political. A word like ‘noise’, for example, is dependent on a division between certain people hearing the railway and being disturbed by the sound – i.e. generally those close by – and those that are either out of earshot, or are undisturbed by the sound. Similarly ‘capacity’, discussed in the excerpt of Table 4, implies different groups of people: those that will or may use the railway, and those that probably won’t. The language appropriates and *implicates* actors (Meadowcroft 2009; Umney 2016), with their associated behaviours, into the design process, with precedent the vehicle to do this. This may be key to the reframing that the use of a precedent attempts to achieve, through first identifying and then reconfiguring the groups of actors that will be affected (including the participants contributing to the design process itself). This puts a greater emphasis on the social aspects to problem solving rather than the technical or conceptual aspects, the suggestion being again that complex problems are not solved by one major reframing, but by a sequence of attempts to reframe in order to identify, categorise, configure, and conscript distinct participatory groupings.

The present study focused on only one precedent referenced in only one Parliamentary debate. Such an approach was necessary to reveal some of the regularities in the discourse around the use of precedents but the potential for further analysis is considerable. This is especially so given the accessibility and breadth of Parliamentary debates that are transcribed ‘substantially verbatim’ and available without charge online [2]. If, as we have argued, these debates are a kind of design process then these transcripts, and the video recordings of the debate that exist in the same archive, can be thought of as a rich source of naturally-occurring designing data, readily available for analysis from any number of design perspectives. Used in this way the Parliamentary archive provides a socio-political comparison to the common dataset methodology used in the Design Thinking Research Symposia series (McDonnell & Lloyd 2009b). However, the sheer volume of debate text that is available also suggests a more automated analysis may be possible to reveal widespread regularities in the use of, not only precedent, but other units and types of design discourse. In this respect the tagging scheme we used to identify and analyse the HS1 precedent could form the basis of a broader computational approach drawing on, for example, latent semantics (Dong 2008) or corpus linguistics (Baker 2006). Indeed computational systems are now at a level of sophistication whereby themes can be extracted, along with the meanings that attach to them, suggesting that semi-automated content analyses of design discourse are not too far away (Archer and Jockers 2017). For such analyses the parliamentary archive would appear to be an ideal place to start, and the tagging scheme we have used in this paper would make a good place to start from.

## 6. Notes

[1] The ‘Double Diamond’ model of designing is first described in the UK Design Council Publication *Managing design in eleven global brands: A study of the design process*, <http://tinyurl.com/hlkukha> (accessed October 2017).

[2] <http://hansard.parliament.uk> (accessed October 2017)

[3] *High Speed Rail Preparation Bill*, 26 June, <http://tinyurl.com/yafm277g> (accessed October 2017)

## 7. References

- Alipour, L. et al., (2017). The impact of designers' goals on design-by-analogy. *Design Studies*, 51(July), 1-24.
- Archer, J. and Jockers, M. (2017). *The bestseller code: Anatomy of the blockbuster novel*, St Martin's Press.
- Bailey, J. and Lloyd, P. (2016) The introduction of design to policymaking: Policy lab and the UK government, in Lloyd, P. and Bohemia, E. (eds.) *Design + Research + Society - Future-Focused Thinking: Proceedings of DRS2016*, 28-30th June, Brighton, UK, Volume 9, 3619-3634.
- Baker, P. (2006). *Using Corpora in Discourse Analysis*, Continuum.
- Ball, L. and Christensen, B. (2009). Analogical reasoning and mental simulation in design: two strategies linked to uncertainty resolution. *Design Studies*, 30(2), 169-186.
- Bason, C. (2014). *Design for policy*, Gower.
- Christensen, B., Ball, L. and Halskov, K. (eds.) (2017). *Analysing design thinking: Studies of cross-cultural co-creation*, Taylor & Francis.
- Crewe, E. (2015) *The house of commons*, London: Bloomsbury.
- Cross, N., Christiaans, H., and Dorst, K. (eds.) (1996) *Analysing design activity*, John Wiley & Sons, Chichester, UK.
- Doboli, A. and Umbarkar, A., (2014). The role of precedents in increasing creativity during iterative design of electronic embedded systems. *Design Studies*, 35(3), 298–326.
- Dong, A. (2008). *The language of design: Theory and computation*. Springer Science & Business Media.
- Dorst, K. (2015). *Frame innovation: Create new thinking by design*. MIT Press.
- Eilouti, B.H., 2009. Design knowledge recycling using precedent-based analysis and synthesis models. *Design Studies*, 30(4), 340–368.
- Hilton, S. (2016) *More Human: Designing a world where people come first*, W.H. Allen.
- Howlett, M. (2014). From the 'old' to the 'new' policy design: design thinking beyond markets and collaborative governance. *Policy Sciences*, 47(3), 187-207.
- Kimbell, L. (2015) *Applying design approaches to policy making: Discovering policy lab*, University of Brighton and AHRC.

- Langdon, R. (ed.) (1984) *Design policy (volumes 1-5): Proceedings of Design Policy Conference, London 20-23 July 1982*, Design Council, London.
- Lawson, B. (2004). Schemata, gambits and precedent: some factors in design expertise. *Design studies*, 25(5), 443-457.
- Leggett, W. (2014). The politics of behaviour change: nudge, neoliberalism and the state. *Policy and Politics*, 42(1), 3-19.
- Lloyd, P. and Oak, A. (in press) Cracking open co-creation: Frames and stories in collaborative design, *Design Studies*.
- McDonnell, J. and Lloyd, P. (eds.) (2009a) *About: designing – Analysing design meetings*, CRC Press.
- McDonnell, J. and Lloyd, P. (2009b) Introduction. In McDonnell, J., and Lloyd, P. (eds.) *About: designing – Analysing design meetings*, CRC Press, 1-29.
- McDonnell, J. and Lloyd, P. (2014). Beyond specification: A study of architect and client interaction. *Design Studies*, 35(4), 327-352.
- Meadowcroft, J. (2009). What about the politics? Sustainable development, transition management, and long term energy transitions. *Policy sciences*, 42(4), 323-340.
- Meyler, B. (2016) The rhetoric of precedent. In *Rhetorical Processes and Legal Judgments*, Sarat, A. (ed.) Cambridge: Cambridge University Press
- Miller, D. and Rudnick, L. (2011) Trying it on for size: Design and international public policy. *Design Issues*, 27(2), 6–16.
- Paton, B. and Dorst, K. (2011). Briefing and reframing: A situated practice. *Design Studies*, 32(6), 573-587.
- Pugh, S. (1990). *Total design: integrated methods for successful product engineering*, Prentice Hall.
- Rein, M. and Schön, D. (1996). Frame-critical policy analysis and frame-reflective policy practice. *Knowledge and Policy*, 9(1), 85-104.
- Rogers, R. and Walters, R. (2015) *How parliament works*, London: Routledge.
- Roozenburg, N. and Cross, N (1991). Models of the design process: integrating across the

disciplines. *Design Studies*, 12(4), 215-220.

Schön, D. (1980) *Policy planning as a design process*, Occasional Paper No.12 of the Centre for Human Settlements, University of British Columbia.

Schön, D. (1983) *The reflective practitioner: How professionals think in action*, Basic Books.

Schön, D. and Rein, M. (1994) *Frame reflection: Toward the resolution of intractable policy controversies*, Basic Books.

Schön, D. and Wiggins, G. (1992) Kinds of seeing and their functions in designing. *Design Studies*, 13(2), 135–156.

Schön, D. (1988). Designing: Rules, types and worlds. *Design studies*, 9(3), 181-190.

Schön, D. (1984). Problems, frames and perspectives on designing. *Design Studies*, 5(3), 132-136.

Senbel, M. et al., 2013. Precedents reconceived: Urban design learning catalysed through data rich 3-D digital models. *Design Studies*, 34(1), 74–92.

Sunstein, C. (2014). Nudging: a very short guide. *Journal of Consumer Policy*, 37(4), 583-588.

Umney, D. (2016) *A Design analysis of parliamentary debate*, PhD thesis, Open University, Milton Keynes UK.

Umney, D., Lloyd, P., and Potter, S. (2014) Political debate as design process: a frame analysis. In Lim, Y-K., Niedderer, K., Redström, J., Stolterman, E., and Valtonen, A. (eds.) *Design's big debates: Proceedings of the 2014 Design Research Society Conference (DRS2014)*, Umeå, June 2014.

van Dijk, T. (2000) On the analysis of parliamentary debates on immigration. In Reisigl, M. and Wodak, R. (eds.), *The semiotics of racism: Approaches to critical discourse analysis*, Passagen Verlag, 85-103.

Voß, J., Smith, A. and Grin, J. (2009). Designing long-term policy: rethinking transition management. *Policy Sciences*, 42(4), 275-302.